

**REMARKS**

Favorable reconsideration of this application is respectfully requested in view of the claim amendments and following remarks.

**Status of Claims**

Claims 8-9, 29, and 37 were previously canceled without prejudice or disclaimer of the subject matter contained therein.

Claims 13-18 and 30-34 are withdrawn from consideration.

Claims 1-7, 10-28, and 30-36 are currently pending in the application of which claims 1, 19, 24, and 35 are independent.

Claims 1-7, 10-12, 19-28, and 35-36 are rejected.

No new matter has been introduced by way of the amendments above. Entry thereof is therefore respectfully requested.

**Summary of the Office Action**

Claims 35-36 were rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter.

Claim 24 was rejected under 35 U.S.C. §112 sixth paragraph.

Claims 1, 6-7, 12, 24, and 35 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0152293 to Hahn et al. (hereinafter “Hahn”) in view of U.S. Patent No. 5,805,593 to Busche, and in view of U.S. Patent No. 5,491,690 to Alfonsi et al. (hereinafter “Alfonsi”), further in view of U.S. Patent No. 7,020,698 to Andrews et al. (hereinafter “Andrews”).

Claims 2-5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, and Andrews, and further in view of U.S. Patent Application Publication No. 2004/0221154 to Aggarwal.

Claims 10-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, and Andrews, and further in view of U.S. Patent Application Publication No. 2005/0122904 to Kumar.

Claims 19-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, Andrews, and U.S. Patent Application Publication No. 2005/0030904 to Oom Temudo de Castro et al. (hereinafter “Castro”), and further in view of U.S. Patent No. 5,345,444 to Cloonan et al. (hereinafter “Cloonan”).

Claims 21-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, Andrews, Castro, and Cloonan, and further in view of U.S. Patent Application Publication No. 2004/0008687 to Matsubara.

Claims 25-29 and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, and Andrews, and further in view of Aggarwal.

The rejections above are respectfully traversed for at least the reasons set forth below.

Drawings

The Office Action did not indicate whether the formal drawings filed with the application are accepted. Indication of acceptance of the drawings is requested.

Claim Rejection Under 35 U.S.C. §101

Claims 35-36 were rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Claims 35 and 36 have been amended to recite a non-transitory computer readable medium storing computer software, similar to suggested by the Examiner to overcome the rejection. Accordingly, the rejection should be withdrawn.

*Claim Rejections Under 35 U.S.C. §112, 6<sup>th</sup> Paragraph*

Claim 24 was rejected because there is no function specified by the words preceding “means for”. However, the function is clearly recited in claim 24 after the “means for”, such as means for receiving a request, means for searching stored information, and means for applying a clustering algorithm. Since the function is clearly recited in the claims, the rejection should be withdrawn.

*Claim Rejections Under 35 U.S.C. §103(a)*

The test for determining if a claim is rendered obvious by one or more references for purposes of a rejection under 35 U.S.C. § 103 is set forth in *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007):

“Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” Quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966).

As set forth in MPEP 2143.03, to ascertain the differences between the prior art and the claims at issue, “[a]ll claim limitations must be considered” because “all words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385. According to the Examination Guidelines for Determining

Obviousness Under 35 U.S.C. 103 in view of *KSR International Co. v. Teleflex Inc.*, Federal Register, Vol. 72, No. 195, 57526, 57529 (October 10, 2007), once the *Graham* factual inquiries are resolved, there must be a determination of whether the claimed invention would have been obvious to one of ordinary skill in the art based on any one of the following proper rationales:

(A) Combining prior art elements according to known methods to yield predictable results; (B) Simple substitution of one known element for another to obtain predictable results; (C) Use of known technique to improve similar devices (methods, or products) in the same way; (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results; (E) “Obvious to try”—choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success; (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art; (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention. *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007).

Furthermore, as set forth in *KSR International Co. v. Teleflex Inc.*, quoting from *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006), “[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasonings with some rational underpinning to support the legal conclusion of obviousness.”

Therefore, if the above-identified criteria and rationales are not met, then the cited reference(s) fails to render the claims obvious and, thus, the claims are distinguishable over the cited reference(s).

- **Claims 1, 6-7, 12, 24, and 35**

Claims 1, 6-7, 12, 24, and 35 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche and Alfonsi, and further in view of Andrews.

Claim 1 recites,

applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and to further reduce the size of the set of candidate service nodes.

The rejection admits Hahn in view of Busche and Alfonsi does not disclose these features, but asserts Andrews discloses these features in column 16, lines 33-38. Andrews discloses creating a set of clusters, represented by 32a-f shown in figure 4. The clusters are not service nodes. The clusters are client devices that send requests for content from the content servers 34a-g shown on the right side of figure 4. Thus, Andrews does not disclose applying a clustering algorithm to the plurality of service nodes, because the client nodes in Andrews are not service nodes that provide a requested service. Claim 1 clearly recites a service node is operable to provide a requested service. Instead, the client nodes of Andrews may receive the service but are not service nodes providing a service.

In addition, the clustering in Andrews does not identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service, and the clustering in Andrews does not further reduce the size of the set of candidate service nodes. Firstly, the clustering in Andrews cannot further reduce a size of the set of candidate service nodes because there is no set of candidate service nodes to start with that can be reduced. Secondly, the output of the clustering in Andrews is not a closest node. Instead, the output of the clustering is groups of client devices. These groups are then later mapped to the content servers 34a-g but the mapping is not part of the clustering.

Independent claim 24 recites, *inter alia*, “means for applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and to further reduce the size of the set

of candidate service nodes.” Thus, claim 24 recites certain features similar to those recited in independent claim 1 above.

Independent claim 35 recites, *inter alia*, “applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and to further reduce the size of the set of candidate service nodes.” Thus, claim 35 recites certain features similar to those recited in independent claim 1 above.

For at least these reasons, claims 1, 6-7, 12, 24, and 35 are believed to be allowable.

- **Claims 2-5**

Claims 2-5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, and Andrews, and further in view of Aggarwal. Claims 2-5 are believed to be allowable at least for the reasons their independent claim is believed to be allowable.

- **Claims 10-11**

Claims 10-11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, and Andrews, and further in view of Kumar. Claims 10-11 are believed to be allowable at least for the reasons their independent claim is believed to be allowable.

- **Claims 19-20**

Claims 19-20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, Andrews, and Castro, and further in view of Cloonan.

Independent claim 19 recites, *inter alia*, “applying a clustering algorithm to the plurality of service nodes to identify a set of candidate service nodes from the plurality of service nodes closest to a node requesting the service and to further reduce the size of the set of candidate service nodes”. Thus, claim 19 recites certain features similar to those recited in independent claim 1 above. Therefore, claims 19-20 are believed to be allowable.

- **Claims 21-23**

Claims 21-23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, Andrews, Castro, and Cloonan, and further in view of Matsubara.

Claims 21-23 are believed to be allowable at least for the reasons their independent claim is believed to be allowable.

- **Claims 25-29 and 36**

Claims 25-29 and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hahn in view of Busche, Alfonsi, and Andrews, and further in view of Aggarwal.

Claims 25-29 and 36 are believed to be allowable at least for the reasons their independent claim is believed to be allowable.

*Conclusion*

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited. Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below. Please grant any required extensions of time and charge any fees due in connection with this request to Deposit Account No. 08-2025.

Respectfully submitted,

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